

Applicant : Carl L. Sisemore  
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Filed : September 8, 2003  
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**REMARKS**

By this Amendment, the specification and claim 1 and 2 are amended to correct minor informalities. Accordingly, claims 1 and 2 are pending in this application. No new matter is added by any of these amendments.

Reconsideration based on the following remarks is respectfully requested.

**I. Indefiniteness Rejection under 35 U.S.C. §103 ¶2**

The Office Action rejects claims 1 and 2 as being allegedly indefinite under 35 U.S.C. §112, second paragraph. Applicant amends claims 1 and 2 to obviate the rejection. In particular, the terms identified in the Office Action have been deleted or replaced. Withdrawal of the indefiniteness rejection is respectfully requested.

**II. Anticipatory Rejection under 35 U.S.C. §102**

The Office Action rejects claims 1 and 2 as being allegedly anticipated under 35 U.S.C. §102 over by ShipConstructor ShipCAM by Albacore Research Ltd. (hereinafter "ShipCAM"). This rejection is respectfully traversed.

Applicant's claims are directed generally, for example, to a method for structural modeling of a ship. These descriptions are supported in the specification at, for example, page 6 line 9 – page 9 line 9 (corresponding to paragraphs [0015] – [0026] of U.S. Patent Application Publication 2005/0052453) and Figs. 1 and 2. The ship model 10 may be coarsely represented by a hull 12 and a longitudinal beam 20. The hull 12 forms a thin shell that separates a wet exterior portion 11 from a dry interior portion 13. The hull 12 may include nodes 17 that connect to their counterparts on the beam 20 by rib connectors 14 (described in context to legs of a "spider" in the specification). A section or slice 18 of the ship model 10 may represent in detail a longitudinal portion of the ship including interior structural members 16, such as decks, bulkheads and equipment. Applicant's claimed features provide a coarse model of the entire ship structure, together with a longitudinally defined portion with detail. This coupling of a detailed portion with a coarse whole enables accurate prediction of deflection and oscillatory responses of a ship to induced loads with reduced computational resources.

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In particular, Applicant's independent claim 1 recites a method including "constructing a thin shell hull model of the ship having cross-sections extending along a longitudinal centerline, the sections defining wet and dry regions, the hull model having a plurality of hull nodes; constructing a beam model of the ship within the dry region, the beam model having a principal beam that extends along the centerline, the beam model having a plurality of beam nodes; connecting the principal beam to the hull model through a series of substantially rigid rib connections from the beam nodes to corresponding members of the hull nodes; adjusting the beam model to characterize inertial mass and stiffness of the ship; constructing a detailed section model of a cross-section portion of the ship, the portion extending longitudinally along part of the beam and hull models, the detailed model including nodes that represent equipment, the hull model and the beam model; replacing the part of the beam model with the detailed model; and removing added lump masses along the beam at the detailed model."

Instead, ShipCAM discloses a computer aided modeling software tool. In particular, ShipCAM teaches automated drawing techniques for fairing, splining and lofting surfaces to refine a hull shape. In addition, ShipCAM provides for expansion of plates that discretely form the hull shape. See pp. 15, 25, 37 and 45 of ShipCAM. However, Applicant fails to discern any indication that ShipCAM even suggests modeling a ship as gross hull and beam portions and integrating into a portion of the beam portion a detailed section, as provided in claim 1.

Applicant asserts that ShipCAM does not anticipate Applicant's claimed features for modeling a ship with coarse and detailed portions. These arguments also apply claim 2 based on its dependence from claim 1. Further, ShipCAM does not teach adding lumped masses and varying cross-section and/or material properties until the natural frequencies of the model and ship substantially agree, as provided in claim 2.

Consequently, both claims are in condition for allowance. Thus, Applicant respectfully requests that the rejection under 35 U.S.C. §102 be withdrawn.

### III. Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

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Should the Examiner believe that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number listed below.

Respectfully submitted,



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